

ABSTRACT

A system for remotely controlling one or more locomotives. The system includes a remote control unit on which a human operator enters commands, and a locomotive controller
5 mounted in the locomotive to implement the commands. The remote control unit communicates with the locomotive controller over a radio frequency (RF) communication link. The communication link is a Time Division Multiple Access (TDMA) link. A TDMA arrangement allows several locomotives to be controlled by respective master controllers while constraining all the communication links to a common frequency band. To avoid
10 conflicts, each communication link is assigned a different time interval. The length of the time interval can be varied according to selected parameters of the system, one such parameter being the number of locomotives currently controlled. When few locomotives are being currently controlled, the time interval assigned to each communication link can be expanded to provide increased bandwidth. When more locomotives are being controlled,
15 shorter time intervals are used to accommodate the additional number of locomotives.